

ADDITIONS TO THE JAPANESE LAND SNAIL FAUNA—No. VIII.

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Several new forms of *Clausilia* have been detected by Mr. Hirase since the publication of No. VII of this series.¹ They are chiefly from Shikoku Island, and all belong to groups already well represented in the same regions. A single species herein described from Sado is the first *Clausilia* to be made known from that island.

Section HEMIPHÆDUSA Bttg.

(Group of *C. awajensis*.)

Clausilia sadoensis n. sp. Pl. XIV, figs. 6, 7, 8, 9, 10.

Shell *slender*, attenuate above, brown. Surface somewhat glossy, finely striate, paler and smoother above, hardly more coarsely striate on the last whorl. Whorls $10\frac{1}{2}$ to 11, convex, the last compressed laterally, and having a rounded ridge or varix behind the basal and outer lips. Aperture small; peristome white, reflexed, continuous, the parietal margin erect and free. Superior lamella compressed, marginal, continuous with the spiral lamella or interrupted. Spiral lamella short, not quite reaching the middle of the ventral side. Inferior lamella deeply receding, straightened within, as long as the spiral lamella. Subcolumella lamellar emerging but weak. Principal plica short, latero-dorsal. Upper palatal plica short, in the middle joined to the long, nearly straight lunella, which curves inward slightly toward the lower end.

Length 15.5 to 16, diam. 3.5 mm.

Length 14, diam. 3.5 mm.

Clausilium long, parallel-sided, rounded apically, deeply excised on the columellar side of the filament (figs. 8, 9).

Misakimura, Sado. Types No. 84,394, A. N. S. P., from No. 993 of Mr. Hirase's collection.

Closely related to *C. ischna*, especially to the variation of that species which I called var. *neptis*, but *C. sadoensis* differs in the stronger ridge behind the lip (barely indicated or not perceptible in *C. ischna*), and in having the spiral and inferior lamellæ of equal length inside, while in

¹ These *Proceedings* for 1902, pp. 517-533.

ischna and *neptis* the spiral lamella penetrates decidedly farther than the inferior lamella.

***Clausilia shikokuensis* var. *inokuchiensis* nov.**

Smaller than *shikokuensis*, orange-brown; whorls $9\frac{1}{2}$, the early ones attenuate. Length 13, diam. 3.2 mm.

Inokuchimura, Tosa; No. 84,391, A. N. S. P., from No. 506c of Mr. Hirase's collection.

A small reddish form, very solid and strong, but structurally like the larger brown *C. shikokuensis*.

***Clausilia sus* n. sp.** Pl. XIV, figs. 1, 2, 3, 4, 5.

Shell quite obesely fusiform, attenuate above, orange-brown, solid and strong, somewhat glossy, finely striate. Whorls $8\frac{1}{2}$, moderately convex, the last compressed laterally. Aperture only slightly oblique, the peristome expanded and reflexed, somewhat thickened, orange-brown or whitish, a little emarginate at the position of the superior lamella. Superior lamella compressed, subvertical and marginal, continuous with the spiral lamella, which penetrates to a point above the superior lamella. Inferior lamella deeply receding, thick below, penetrating as deeply as the spiral lamella. Subcolumellar lamella wholly immersed or very weakly emerging. Principal plica visible deep in the throat, entering to a lateral position. Upper palatal plica very short and small, almost obsolete. Lunella strong and a little curved inward below, very weak and low above, where it connects with the middle of the upper palatal plica.

Length 11.5, diam. 3.7 mm.

Length 11, diam. 3.5 mm.

Clausilium (Pl. XIV, figs. 2, 3) parallel-sided, thin and acute at the apex, excised on the columellar side of the filament.

Muya, Awa, Shikoku Island. Types No. 84,393, A. N. S. P., from No. 1,007 of Mr. Hirase's collection.

The obese shape of the shell and slightly curved lunella, very strong below and weak above, are characteristic, and the acuminate, acute apex of the clausilium equally so. Some specimens are less swollen, length 12, diam. 3.3 mm. It is not closely related to any other species I have seen, but groups with *C. shikokuensis*.

(Group of *C. validiuscula*.)

***Clausilia aratorum* n. sp.** Pl. XIV, figs. 15, 16, 17, 18.

Shell small, slender and thin, light brown and slightly transparent. Surface glossy, coarsely sculptured with strong, regular, straight striae. Apical whorls smooth, rather large. Whorls 9, somewhat convex, the

last somewhat compressed, very shortly projecting in front. Aperture slightly oblique, the peristome continuous, narrowly reflexed, but little thickened. Superior lamella marginal, thin and compressed, separated from the spiral lamella, which extends inward to the middle of the front side. Inferior lamella deeply receding, thin and straightly ascending within, penetrating deeper than the spiral lamella. Subcolumellar lamella deeply immersed. Principal plica hardly a third of a whorl long, latero-dorsal. Upper palatal plica short and low, a low, short, nearly straight lunella connected with it.

Length 9.5, diam. 2 mm.

Length 8.5, diam. 1.8 mm.

Clausilium long and narrow, rounded distally, excavated on the columellar side of the filament. It is very similar to that of *C. ænea*, but tapers less distally (figs. 17, 18).

Shimohanyama, Tosa, Shikoku Island. Types No. 84,438, A. N. S. P., from No. 1,013 of Mr. Hirase's collection.

This small, thin, rib-striate species seems by its palatal armature to be related somewhat to *C. micropæas*, but in all other respects it resembles the slightly larger *C. ænea* which was found with it. Both may be more nearly related to *C. tosana* than to other described species. The lunella in *C. aratorum* is very weak except close to the upper palatal plica, where it becomes stronger; and in some shells only this stronger portion is present, making with the plica an irregularly triangular callous, without the extension downward shown in the figure. I can see no trace of a lower palatal plica. The subcolumellar lamella has no spiral extension within, on the ventral side of the penult. whorl parallel to the spiral and inferior lamellæ, in either this species or *C. ænea*.

Clausilia ænea n. sp. Pl. XIV, figs. 11, 12, 13, 14.

Shell slender, fusiform, brown with a bronzed luster, the surface closely, strongly striate. Whorls $9\frac{1}{2}$, convex, the last somewhat compressed laterally. Aperture slightly oblique, piriform, the peristome thin, free, expanded and slightly reflexed, somewhat emarginate above. Superior lamella thin, compressed, vertical, almost separated from the spiral lamella, which penetrates to the middle of the ventral side. Inferior lamella deeply receding, thin and straightly ascending within, as long as the spiral lamella. Subcolumellar lamella deeply immersed. Principal plica short, dorso-lateral. Upper and lower palatal plicæ short, parallel, connected by a low ridge upon which there are three low tubercles.

Length 12.5, diam. 2.5 mm.

Length 11, diam. 2.3 mm.

Clausilium (Pl. XIV, figs. 11, 12) long and narrow, widest and projecting a little on each side near the filament, tapering distally; excised on the columellar side of the filament.

Shimohanyama, Tosa, Shikoku. Types No. 84,392, A. N. S. P., from No. 1,014 of Mr. Hirase's collection.

Similar to *C. aratorum* in sculpture, aperture and lamellæ, but having a distinct lower palatal plica and a low lumella upon which several low plicæ are seen, in this respect resembling *C. tosana*. The latter is a more finely striate shell with the last whorl projecting more in front, and the clausilium of a different shape.

(Group of *C. platyauchen*.)

Clausilia platyderula n. sp.

Shell similar to *C. platydera*, but much smaller; brown; finely and sharply striate. Superior lamella compressed, marginal, continuous with the spiral lamella, which penetrates past the ventral side. The inferior lamella penetrates equally far. The subcolumellar lamella emerges at least slightly. The lunella is like that of *platydera*.

Length 17, diam. 3.8 mm.

Length 15, diam. 3.3 mm.

Aki, Tosa, Shikoku Island. Types No. 84,443, A. N. S. P., from No. 434d of Mr. Hirase's collection.

It will be figured in a general review of the species of the *platyauchen* group, in preparation.

Section TYRANNOPHÆDUSA Pils.

Clausilia bilabrata var. *tosaensis* nov.

A small form with the shell very strong, the spire *entire*, and the aperture comparatively small, its greatest length contained $4\frac{1}{2}$ times in that of the shell; superior and spiral lamellæ not united or but weakly so. Whorls about 12.

Length 20, diam. 4.3 to 4.8 mm.

Shiujōmura, Tosa, Types No. 84,378, A. N. S. P., from No. 1,012 of Mr. Hirase's collection.

Section STEREOPHÆDUSA Bttg.

Clausilia echigoensis n. sp.

Shell wide below, rapidly tapering upward, attenuate near the apex, several early whorls hardly increasing in diameter, making the outlines concave above; dark chestnut colored, yellow or paler below the suture.

Surface *very glossy*, sculptured with *coarse, oblique ribs*, narrower

than their intervals, becoming finer and then disappearing on the early whorls; the intervals between the ribs more or less crinkled. Whorls 11, moderately convex, the last half of the last whorl flattened and compressed, rounded beneath. Suture marked with a fine white line. Aperture nearly vertical, dark inside, the peristome white, narrowly reflexed. Superior lamella small and low, narrow, not continuous with the spiral lamella, barely reaching the margin or not reaching it. Spiral lamella short, not quite reaching the middle of the ventral side. Inferior lamella forming a strong fold in the aperture, becoming subhorizontal, strongly spiral within, a little longer than the spiral lamella. Subcolumellar lamella barely emerging or immersed. Principal plica quite short, latero-dorsal. Upper palatal plica lateral, short. Lower palatal plica shorter, oblique. No lunella.

Length 28.7, diam. 7.7-8 mm.

Clausilium wide, thickened and somewhat angular at the apex, somewhat excised on the columellar side of the filament.

Myokozan, Echigo. Types No. 84,444, A. N. S. P., from No. 986 of Mr. Hirase's collection.

Belonging to the *C. japonica* group, this species seems well distinguished by its robust shape and very strong sculpture. It will be figured with the other species of the *japonica* group of *Stereophaedusa*, in a revision of them now in preparation.

***Clausilia japonica* var. *perstriata* nov.**

Similar to *japonica* except in sculpture, the surface being strongly, deeply and closely rib-striate.

Kumanogongen, Echigo. Types No. 84,376, A. N. S. P., from No. 986a of Mr. Hirase's collection.

EXPLANATION OF PLATE XIV.

Figs. 1, 2, 3, 4.—*Clausilia sus* n. sp. Typical form.

Fig. 5.—*Clausilia sus*, a more attenuate variation occurring with the preceding.

Figs. 6-10.—*Clausilia sadoensis*, n. sp.

Figs. 11-14.—*Clausilia aenea* n. sp.

Figs. 15-18.—*Clausilia aratorum* n. sp.